REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 14-23 are pending in this application. Claims 14-16 and 19-21 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. patent 6,114,8432 to Olah in view of U.S. patent 6,014,042 to Nguyen. Claims 17, 18, 22, and 23 were objected to as dependent upon a rejected base claim, but were noted as allowable if rewritten in independent form to include all of the limitations of their base claims and any intervening claims.

Initially, applicants gratefully acknowledge the indication of the allowable subject matter of claims 17, 18, 22, and 23.

Addressing now the rejection of claims 14-16 and 19-21 as unpatentable over Olah in view of Nguyen, applicants respectfully submit the basis for the outstanding rejection has not properly considered all the features recited in independent claims 14 and 19. Specifically, independent claim 14 recites that the power supply voltage step down circuit "lowers the internal power supply voltage as the estimated amount of the gate leakage current becomes large". Applicants respectfully submit the applied art does not teach or suggest any such lowering of the internal power supply voltage.

More particularly, independent claim 14 is directed to a semiconductor integrated circuit that includes a power supply voltage step down circuit and a MOS circuit group. The power supply voltage step down circuit is supplied with a power supply voltage and outputs an internal power supply voltage lower than the power supply voltage to an internal power supply line. The MOS circuit group is supplied with the internal power supply from the internal power supply line. The power supply voltage step down circuit estimates an amount of gate leakage currents flowing in the MOS circuit group and ***lowers the internal power supply voltage as the estimated amount of the gate leakage currents becomes large***. Independent Claim 19 recites similar features as Claim 14.

In a non-limiting example, Figure 1 shows the semiconductor integrated circuit having the power supply voltage step down circuit 1 and the MOS circuit group 3. In another non-limiting example, Figure 4 shows how the amount of gate leakage currents flowing in the MOS circuit group is estimated.

The semiconductor integrated circuit of Claims 14 and 19 advantageously maintains approximately constant a total amount of gate leakage currents in the MOS circuit group independent of non-uniformities of the manufacturing process of the integrated circuit.[1]

In contrast to the above-noted claim features, the output driver circuit 330 in Figure 3 of Olah including circuit elements 331, 332, and 333 does not at all have a function to lower an internal power supply voltage as an estimated amount of a gate leakage current becomes large. The feedback circuit including the op-amp 331 and transistors 2210(1) and 2210(2) in Olah control the voltage Vccint to be constant. However, Olah does not teach or suggest lowering the voltage of Vccint as the leakage current of a capacitor 333 becomes large. In fact Olah discloses a contrary operation as in Olah if the leakage current of the capacitor 333 becomes large, the feedback current raises the voltage Vccint so that the voltage Vccint is maintained to be constant.

As noted above, the claims require a contrary operation as in Olah as in the claims the internal power supply voltage is lowered as the estimated amount of the gate leakage current becomes large. Applicants respectfully submit the outstanding rejection has not fully considered the above-noted claim feature, nor does the outstanding rejection even address the above-noted claim feature.

Moreover, no teachings in the secondary applied reference to Nguyen can overcome the above-noted deficiencies of Olah.

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[1] See, for example, the specification at page 18, line 10 to page 19, line 29.

More particularly, Nguyen discloses in Figure 4 a capacitor made of a MOS structure only. Nguyen in that respect also does not teach or suggest the above-noted claim feature of the power supply voltage step down circuit lowering the internal power supply voltage as the estimated amount of the gate leakage current becomes large.

In view of the present response applicants respectfully submit each of the pending claims is allowable.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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